

WHAT IS CLAIMED IS:

1. An automation system for solving a process-related task definition or operating a technical system, comprising:
 - 5 a computer system, which, in at least one field level with field bus components and automation devices, is broken down into a control level with at least one server and a client level with one or more client computers, the computer system including an automation category comprising system objects, said objects including at least one of physical system objects and part-processes, the automation category further comprising functions which incorporate said system objects in a process-related sequence, the automation category being developed within one standard context for different types of individual automation elements of an automated task and being developed on the basis of server-related data elements and client-related data elements, and wherein the automation elements are each compiled using server-related data elements, client-related data elements, and function elements, which are configured so as to optimize predetermined requirements of the automation elements.
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2. The automation system as claimed in claim 1, wherein the server-related data elements are generated jointly with the automation category and remain fixed for the entire life of the automation category.
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3. The automation system as claimed in claim 1, wherein the client-related data elements are created when and as needed during an operating time of the automation category and are specific to client elements of the automation category.
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4. The automation system as claimed in claim 1, wherein server elements of the automation category exist permanently for the life of the automation category.
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5. The automation system as claimed in claim 1, wherein client elements of the automation category are created and deleted when and as needed during an operating time of the automation category.

6. The automation system as claimed in claim 1, wherein a plurality of client elements of the automation category exist simultaneously.
- 5 7. The automation system as claimed in claim 1, wherein client elements of the automation category are linked to a corresponding pre-existing server element thereof as and when the client elements are created.
- 10 8. The automation system as claimed in claim 1, wherein individual automation elements are graphically and textually integrated in the automation category.
9. The automation system as claimed in claim 1, wherein the automation elements are defined via at least one of a control system, an alarm system, a display, a user interface, a data input, and a data evaluation system.
- 15 10. The automation system as claimed in claim 1, wherein the automation elements are each categorized as one of server elements and client elements depending on subsequent application, technical requirements, and execution thereof.
- 20 11. The automation system as claimed in claim 1, wherein the automation elements include automation elements relating to a control system and data input, and wherein the automation elements relating to the control system and data input constitute server elements.
- 25 12. The automation system as claimed in claim 1, wherein the automation elements include automation elements relating to a user interface, display, and data evaluation, and wherein the automation elements relating to the user interface, display, and data evaluation constitute client elements.
- 30 13. The automation system as claimed in claim 1, wherein programming means for functions are set up to cover automation elements.
14. The automation system as claimed in claim 1, wherein the function elements cooperate with the client-related data elements and the server-related data elements.

15. The automation system as claimed in claim 1, wherein subsidiary aspects of the automation elements are provided in the form of one or more of a configuration interface, an image processing system, a simulation, and documentation.

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16. The automation system as claimed in claim 1, wherein the control level is provided with at least one server pair to provide a redundant structure.

10 17. A method of solving an automated task definition made up of automation elements of different types with the aid of a computer system comprising several hardware-related levels broken down into a control level having at least one server and a client level having one or more client computers, the method comprising:

15 solving the entire task definition on a template basis using an automation category for system objects and functions, said system objects including at least one of

physical system objects and part-processes, wherein the functions incorporate the system objects in a process-related sequence, and wherein a category-specific data record is created in which, in addition to control data, at least one of data for a display and data for a user interface is also defined, all parts of the data record being defined within the context of the automation category and being categorized into server-

20 related data elements and client-related data elements, and wherein each of the automation elements is compiled on the basis of the server-related data elements, client-related elements, and function elements made up of graphical and textual mechanisms designed to optimize predetermined requirements of the automation element.

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18. The method as claimed in claim 17, wherein the data record is divided into server elements and client elements by reference to the different types of automation elements and physical devices.

30 19. The method as claimed in claim 17, wherein the data record is created in at least one of graphical and text format.

20. The method as claimed in claim 17, wherein all function elements of the

automated task are solved within the context of the automation category and are also categorized as server-related function elements and client-related function elements.

21. The method as claimed in claim 17, wherein the automation category is
5 published in a library.

22. The method as claimed in claim 21, wherein the library is provided so as to
be accessible by network devices.

10 23. The method as claimed in claim 22, wherein a plurality of automation
categories of different types are published in the library, and wherein the different
types of automation categories of the library are made available to users via a global,
network facility.

15 24. The method as claimed in claim 17, wherein automation projects are
compiled from one or more individual copies of one or more automation categories
and the structure of the data record and the functions of said automation categories are
imported into each copy of the automation categories.

20 25. The method as claimed in claim 24, wherein the copies of the automation
categories are linked to the automation project with a programming means that is also
used to create the automation categories.

25 26. The method as claimed in claim 17, wherein several automation categories
are in turn compiled to form a separate automation category and represent part-
processes accordingly.

30 27. The method as claimed in claim 17, wherein the automation elements are
categorized into server elements and client elements firstly on the basis of subsequent
application thereof, then on the basis of technical requirements and execution thereof.

28. The method as claimed in claim 17, wherein the server elements exist for the

entire life of the automation category and the client elements are created from scratch every time the respective function or the respective automation element is needed.

29. The method as claimed in claim 17, wherein each of the server elements
exists permanently and once only per automation category and wherein at least one of
the client elements exists on a multiple basis and simultaneously.

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